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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,695	02/12/2001	Terrence L. Graham	22727/04056	6144

24024 7590 11/02/2005

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EXAMINER

PRYOR, ALTON NATHANIEL

ART UNIT PAPER NUMBER

1616

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/781,695

Applicant(s)

GRAHAM ET AL.

Examiner

Alton N. Pryor

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 12-20, 22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 12 and 15-20, 23 is/are rejected.
- 7) ☐ Claim(s) 13 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/18/05; 10/10/03</u> | 6) <input type="checkbox"/> Other: _____  |

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### **DETAILED ACTION**

Applicant's arguments, see paper, filed 8/8/05, with respect to the claims have been fully considered and are persuasive. The 35 USC 112, and 103(a) rejections of 4/28/05 has been withdrawn. Applicant as amended claims to recite "production of isoflavones" instead of "disease resistance".

Applicant's arguments, see paper, filed 8/8/05, with respect to the rejection(s) of claim(s) under 35 USC 112 and 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of see rejections below.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12,15-20 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for instant method comprising enhancing compound selected from copper salt, orthovanadate, rose Bengal, and tetrazolium redox dyes in the Specification, does not reasonably provide enablement for instant method comprising all other enhancing compounds of instant claims (see specifically claim 12 part b for those category of enhancing compounds). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Because the enhancing compounds in b are of different sizes, polarity and

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electronegativity, the activity of compounds of the formula would be questionable. The predictability in this art is high since a small change in a functional feature could result in a drastic change in activity and such a change can also result in an opposite effect or activity. To one of ordinary skill in the art, it would be a big job to determine the effect of all of the claimed compounds, which fall into the b category. Because of this large burden (determination of which compounds would render desired results), Examiner would like to point out that Applicant would be entitled to a subgenus of what is being claimed; in particular, Applicant would be entitled to enhancing compounds selected from copper salt, orthovanadate, rose Bengal, and tetrazolium redox dyes. Examiner stresses that the subgenus created should be a group of related compounds based on the structure of the compounds exhibited in the Examples disclosed in the specification. Examiner stresses that the subgenus created should be a group of related compounds in terms of size, polarity and electronegativity. Size of a compound determines its ability to fit into the receptor site. Polarity and electronegativity determine binding interactions between the functionality of compound and the functionality of the receptor site. Both of these factors should be heavily considered in the election of a subgenus group of compounds for the instant invention.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Ellis et al (Phototropism of *Pellia*: evidence for mediation by auxin-stimulated acid efflux, J. Plant Physiology, 1985, 121(3),259-64). Ellis teaches a composition comprising sodium orthovanadate plus 2-(chlorophenoxy)-2-methylpropionic acid, i.e., the instant compound where R10-R11 = 2-chlorophenoxy, R12 = 2-propyl, R13 = H. See abstract.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Passilly et al (Phosphorylation of peroxisome proliferators-activated receptor alpha in rat fao cells and stimulation by ciprofibrate, Biochemical Pharmaceutical Pharmacology, 1999, 58 no. 6, 1001-1008). Passilly teaches a method of treating rat Fao cells with ciprofibrate [R10 = 4-(2-dichlorocyclopropyl)phenyl, R11 = O, R12 = C (CH3)2, R13 = H] for gene expression. Passilly also teaches the treatment of rat Fao cells with orthovanadate for gene expression. Passilly does not disclose a composition comprising both ciprofibrate and orthovanadate. However, it would have been obvious to one having ordinary skill in the art to make a composition comprising both ciprofibrate and orthovanadate. One would have been motivated to do this since both compounds are employed individually for gene expression in rat cells. See abstract.

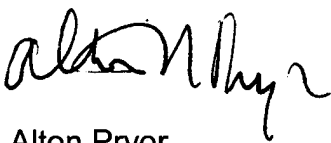
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***Telephonic Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alton N. Pryor whose telephone number is 571-272-0621. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Kunz can be reached on 571-272-0887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alton Pryor  
Primary Examiner  
AU 1616